UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/050,316	01/15/2002	Felix G. Racca	BEAS-02095US0	8714

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EXAMINER
KANG, INSUN

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/050,316	RACCA ET AL.
	Examiner	Art Unit	
	INSUN KANG	2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 February 2008*.
2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6 and 21-34* is/are pending in the application.
  4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-6 and 21-34* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  a)☐ All b)☐ Some * c)☐ None of:
    1.☐ Certified copies of the priority documents have been received.
    2.☐ Certified copies of the priority documents have been received in Application No. _____.
    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
  * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
  Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
  Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1.   This action is in response to the amendment filed 2/11/2008.

2.   As per applicant's request, claims 1, 23, and 30 have been amended. Claims 1-6 and 21-

34 are pending in the application.

Claim Rejections - 35 USC § 112

3.   Claims 1-6 and 21-34 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

4.   Per claims 1, 23, and 30, the meaning of the limitation, "the catalog is employed to

invoke the plurality of heterogeneous applications from within a business process" is unclear.

Interpretation: the catalog…from a business process.

        Per claims 2-6, 21, 22, 24-29, and 31-34, these claims are rejected for dependency on the

above rejected parent claims.

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

6.   Claims 1-6 and 21-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Sarkar et al. (US patent 6,754,659) hereinafter referred to as "Sarkar," in view of Nicholson et al.

(US Patent 6,631,519) hereafter Nicholson, and further in view of Flores et al. (US Patent

5,734,837) hereafter Flores.

Per claim 1:

Sarkar discloses:

-an introspection module that generates a catalog of generic components by introspecting

original JavaBeans and transforming a plurality of implementation-specific components into the

generic components of said catalog (i.e. "To create the generic EJB...known Java and

EJB...interact specifically with all of the Java bean support code...generated for an existing Java

bean," col. 5 lines 47-55; "introspecting each of the one ore more original Java beans to

determine their setter/getter," col. 4 lines 28-42; "installing the single generic EJB in an EJB

container," col. 4, lines 14-27).

Sarkar does not explicitly teach that the plurality of implementation-specific components

is in heterogeneous applications created in different programming languages. However,

Nicholson teaches that such a business process architecture was known in the pertinent art, at the

time applicant's invention was made, to interoperate with a heterogeneous environment by

automatically generating interface definitions for reducing inconsistent interface and data model

definitions in a complex workflow project (i.e. col. 2 lines 5-11; col. 8 lines 48-67). It would

have been obvious for one having ordinary skill in the art to modify Sarkar's disclosed system to

incorporate the teachings of Nicholson. The modification would be obvious because one having

ordinary skill in the art would be motivated to seamlessly integrate with diverse applications

other than Java applications ensuring data consistency by automatically generating interface

definitions as suggested by Nicholson (i.e. col. 2 lines 5-11; col. 8 lines 48-67).

Sakar in view of Nicholson teaches that the catalog is employed to invoke the plurality of heterogeneous applications from within a business process (i.e. col. 5 lines 47-55).

Sarkar further discloses: a component manager coupled to the introspection module and operable to manage said catalog generated by the introspection module by defining and organizing the generic components in said catalog; and a process designer coupled to the component manager and operable to: select at least one of the generic components from said catalog managed by the component manager (i.e. "defining a single generic EJB and installing the single generic EJB in an EJB container...generating EJB support code for each of the one or more original Java Beans," col. 4 lines 20-27; "introspecting each of the one ore more original Java beans to determine their setter/getter," col. 4 lines 28-42; "the generic EJB creates the helper object corresponding to the original Java bean using Java reflection...passed to the generic EJB's business method," col. 4 lines 50-58).

Sarkar and Nicholson do not explicitly disclose graphically constructing a business process definition that includes a series of graphically represented activities linked by one or more transitions. However, Flores teaches that such a graphical tool was known in the pertinent art, at the time applicant's invention was made, to allow a "business process designer to specify the business process design with its network of workflows" via GUI (col. 6 lines 12-20; col. 8 lines 26-30). It would have been obvious for one having ordinary skill in the art to modify the disclosed system of Sarkar and Nicholson to incorporate the teachings of Flores. The modification would be obvious because one having ordinary skill in the art would be motivated to ease programming in business process through visual representations (i.e. col. 8 lines 13-17) as suggested by Flores.

Sarkar further discloses at least one activity of said business process definition invokes

the selected generic component from said catalog; (i.e. "installing the single generic EJB in an

EJB container," col. 4 lines 14-27).

Flores further discloses a repository for storing the graphically generated business

process definition (i.e. "The definitions database contains records that define each type of

business process and workflow in the system," col. 5 lines 15-20).

Sarkar combined with Nicholson and Flores further discloses one or more process

engines that execute said business process definition to instantiate a business process instance,

wherein the business process instance interacts with the plurality of heterogeneous applications

by invoking the generic components in said catalog and wherein the business process instance

integrates the plurality of heterogeneous applications into a single process by invoking services

from the plurality of heterogeneous applications during execution of the activities of said process

(i.e. "executing the EJB support code to drive the generic EJB to perform the functions of the

one or more original Java Beans in the EJB environment," col. 4 lines 20-27).

Per claim 2:

The rejection of claim 1 is incorporated, and further, Sarkar teaches:

An organizational repository that includes said catalog organizational data and a plurality of

business processes generated by said process designer (i.e. col. 2 lines 16-41;col. 6 lines 18-29)

as claimed.

Per claim 3:

The rejection of claim 1 is incorporated, and further, Sarkar teaches:

determine an implementation associated with at least one of the implementation-specific

components; retrieve the at least one of the implementation-specific components;

map each of the at least one of the implementation-specific components to a generic component

to yield a mapping; and save the mapping (i.e. col. 4 lines 50-58; col. 4 lines 14-27; col. 7 lines

50-56; col. 6 lines 50-58).

Per claim 4:

The rejection of claim 1 is incorporated, and further, Sarkar teaches:

wherein the introspection module comprises a plurality of implementation modules, an

implementation module operable to retrieve one or more implementation-specific components

associated with an implementation (i.e. col. 6 lines 1-10, 50-58; col. 7 lines 8-18).

Per claim 5:

Sarkar and Nicholson do not explicitly disclose debugger coupled to the process designer and

operable to detect an error of the business process. However, Flores teaches that a GUI

workflow application builder that includes the consistency checking module was known in the

pertinent art, at the time applicant's invention was made, to validate a business process map and

"preserves the details of the errors detected while checking the consistency of the map (i.e. col.

35 lines 36-40)." It would have been obvious for one having ordinary skill in the art to modify

the disclosed system of Sarkar and Nicholson to incorporate the teachings of Flores. The

modification would be obvious because one having ordinary skill in the art would be motivated

to detect errors for consistency (i.e. col. 35 lines 36-40) as suggested by Flores.

Per claim 6:

The rejection of claim 1 is incorporated, and further, Sarkar teaches:

- a data warehouse coupled to the one or more process engines and operable to store

transactional data describing the executed business process; and a data server coupled to the

data warehouse and operable to organize the transactional data. (col. 7 lines 50-56; col. 6 lines

50-58; col. 2 lines 16-41) as claimed.

Per claim 21:

The rejection of claim 1 is incorporated, and further, Sarkar teaches:

- at least one implementation module that is used to access implementation-specific components

associated with at least one of: Java, Standard Query Language (SQL), Automation, Enterprise

JavaBeans (EJB), CORBA, Remote Method Invocation (RMI), Extensible Markup Language

(XML) schemas, Web Services and Java Naming and Directory Interface (JNDI) ("Java beans,"

col.5 lines 30-40 ; "EJB environment," col. 5 lines 30-41) as claimed.

Per claim 22:

The rejection of claim 1 is incorporated, and further, Sarkar teaches:

- a binding table containing one or more entries that associate the selected implementation-

specific components with generic components from said catalog (i.e. col. 6 lines 50-58).

Per claims 23-29, they are the method versions of claims 1-6 and 21-22, respectively, and are

rejected for the same reasons set forth in connection with the rejection of claims 1-6 and 21-

22 above.

Per claim 30, it is the computer readable medium version of claim 1, respectively, and is

rejected for the same reason set forth in connection with the rejection of claim 1 above.

Per claim 31:

Sarkar and Nicholson do not explicitly disclose that said business process definition is

published to the repository before being deployed to the process engine. However, Flores

teaches publishing the business process definition to the repository was known in the pertinent

art, at the time applicant's invention was made, to "determine new workflow states and available

actions (i.e. col. 5 lines 15-23)." It would have been obvious for one having ordinary skill in the

art to modify the disclosed system of Sarkar and Nicholson to incorporate the teachings of

Flores. The modification would be obvious because one having ordinary skill in the art would be

motivated to record business process definitions into a repository before deploying the

definitions so that new workflow states and available actions can be determined (i.e. col. 5 lines

15-23) as suggested by Flores.

Per claim 32:

Sarkar further discloses:

- the catalog contains one or more entries, each entry including metadata that describes at least

one of the plurality of implementation-specific components (i.e. col. 6 lines 1-10, 50-58; col. 7

lines 8-18).

Per claim 33:

Sarkar and Nicholson do not explicitly disclose that an activity of said business process

definition connects to a subprocess that operates as a business process.   However, Flores teaches

it was known in the pertinent art, at the time applicant's invention was made, to operate any

subprocess (i.e. col. 22 lines 7-12, 22-28) of the business process. It would have been obvious

for one having ordinary skill in the art to modify the disclosed system of Sarkar and Nicholson to

incorporate the teachings of Flores. The modification would be obvious because one having

ordinary skill in the art would be motivated to complete any existing subprocess of the business

process for logical consistency (i.e. col. 22 lines 7-12) as suggested by Flores.

Per claim 34:

Flores further discloses: said transitions indicate a next activity that is to be

initiated after executing a previous activity (i.e. col. 6 lines 27-31).

Response to Arguments

7.   Applicant's arguments with respect to claims 1-6 and 21-34 have been considered but are

moot in view of the new ground(s) of rejection.

The applicant states that the references fail to disclose a business process that integrates a

plurality of different heterogeneous applications into a single process (remark, 10).

In response, Sarkar discloses a single generic EJB's business method to integrate the one or more original code without modification by using Java introspection (i.e. col. 5 lines 47-55; col. 4 lines 28-42). Nicholson teaches interoperating with a heterogeneous environment having diverse applications in different programming languages by automatically generating interface definitions for reducing inconsistent interface and data model definitions in a complex workflow project (i.e. col. 2 lines 5-11; col. 8 lines 48-67). Therefore, Sakar in view of Nicholson teaches that the catalog is employed to invoke the plurality of heterogeneous applications by using the generic EJB container.

The applicant states that Sakar does not maintain the generic EJBs in any catalog (remark, 11).

In response, the claims do not specifically limit the definition of catalog. Furthermore, the EJB container managing the generic EJB is considered to the catalog in Sakar.

Conclusion

8.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

9.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to INSUN KANG whose telephone number is (571)272-3724. The

examiner can normally be reached on M-R 7:30-6 PM.

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Lewis A. Bullock, Jr. can be reached on 571-272-3759. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

        Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Insun Kang/
Examiner, Art Unit 2193

/Lewis A. Bullock, Jr./
Supervisory Patent Examiner, Art Unit 2193